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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,253	03/14/2001	Ikuya Tagawa	2500.65308	3355

7590

06/18/2004

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EXAMINER

MILLER, BRIAN E

ART UNIT

PAPER NUMBER

2652

18

DATE MAILED: 06/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/808,253

**Applicant(s)**

TAGAWA ET AL.

**Examiner**

Brian E. Miller

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 17 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 6-10 and 17 is/are allowed.  
6) ☒ Claim(s) 1-5 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

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Claims 1-10, 17 are now pending.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 4 recites "a lead layer" which is misdescriptive, since only a "pair of lead layers" has been previously set forth.

***Claim Rejections - 35 USC § 102***

1. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Gill (US 5,872,689). (As per claim 1) Gill discloses an MR transducer, as shown primarily in FIGs 3 & 7, including: an MR film 50 extending over a surface of a fundamental layer G1, which fundamental layer is a lower non-magnetic gap layer G1 spreading over a surface of a lower shield layer S1 (as per claim 2); a pair of domain control layers 120, 130 extending over the surface of the fundamental layer so as to interpose the MR film along the fundamental layer; a pair of lead layers 100, 110 (see FIG. 3) respectively spreading over surfaces of the domain control layers; an upper shield layer S2 at a first interface extending along a datum plane, which layer is opposed to the domain control layers at a second interface extending along that datum

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plane as well; an upper non-magnetic gap layer G2 interposed between the MR film and the upper shield layer, the upper shield layer contacting the upper non-magnetic gap layer at the first interface (as per claim 3).

***Claim Rejections 35 U.S.C. 103***

2. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gill et al. For a description of Gill, see the rejection, supra. Gill is silent as to the material of the lead layer being Au. Official Notice is taken that Au is notoriously old and well known in this art to be used as a lead layer material. It would have been obvious to a skilled artisan to have utilized this material, and/or similar materials, as were commonly known in the art, as it was a good conductor of current.

Further, as per claim 5, the upper non-magnetic gap layer G2 extends over the lead layer, the upper shield layer contacting the upper non-magnetic gap layer at the second interface.

***Allowable Subject Matter***

3. Claims 6-10, 17 are allowable over the prior art of record.

***Response to Amendment***

4. Applicant's arguments filed 3/25/04 with respect to claims 1-5 have been fully considered but they are not persuasive.

A...Applicant asserts that Gill does not teach having "lead layers as spreading over surfaces of the domain control layers."

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In response, the Examiner maintains that Gill shows this feature, since lead layers 100, 110 (as shown in FIG. 3) do indeed spread over domain control layers 120, 130. Whether or not the sense current is conducted parallel or perpendicular is not relevant to this argument, because the claims are absent of this limitation.

### *Conclusion*

5. Applicant's amendment necessitated the new ground(s) of rejection, e.g., the 112(2) rejection, presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

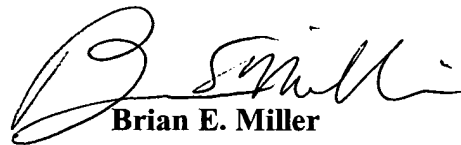
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian E. Miller whose telephone number is (703) 308-2850. The examiner can normally be reached on M-TH 7:15am-4:45pm (and every other friday).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Brian E. Miller**  
**Primary Examiner**  
**Art Unit 2652**

Bem  
June 15, 2004